

REMARKS

Election/Restriction

In response to the restriction requirement contained in the Office Action, Applicants hereby elect invention I. Claims 52-66 and added claims 70-76 read on the elected invention. Non-elected claims 67-69 (system) have been canceled. However, Applicants reserve

In response to the election of species requirement contained in the Office Action Applicants hereby elect Species I with traverse. Claims 52-62 and added claims 70-~~76~~⁷⁶ read on the elected species.

The reason for the traverse is that Invention I (claims 52-66) is directed to a "semiconductor component". However, Figures 2A-2F, which were designated Species I of Invention I, illustrate broad steps in a method for fabricating a component using a "subtractive embodiment" (page 6, lines 5-7). Figures 2G-2J, which were designated Species II of Invention I, illustrate broad steps in a method for fabricating a component using an "additive embodiment" (page 6, lines 8-10). Either of these methods can be used to fabricate the components 12 shown in Figure 4, Figure 5, Figure 6, the component (package 52) shown in Figures 7-7B, the component (test board 48) shown in Figure 6, or the component (package 104) shown in Figure 8D.

The election of species requirement thus does not satisfy the requirements of "MPEP 808.01(a) Species" which states "where there is a relationship disclosed between species, such disclosed relation must be discussed and reasons advanced leading to the conclusion that the disclosed relation does not prevent restriction, in order to establish the propriety of restriction."

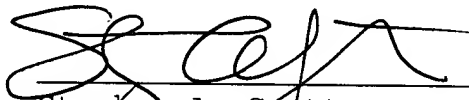
As to elected claims 52-62, claims 52-59 are directed to the component of Figure 4, that includes a substrate 10

having a plurality of tested components including good components 12 and defective components 12D. The substrate 10 also includes a plurality of laser patterned conductors 22 (Figure 2F or 2J) "configured to provide electrical paths to the good components 12 while electrically isolating the defective component 12D". Dependent claims 55 and 58 are directed to the component of Figure 5 wherein the good components are contained in clusters C1-C4. Claims 60-62 and added claims 70-76 are directed to the component (package 52) of Figures 7-7B.

Also being submitted with this Amendment is an Information Disclosure Statement. Favorable consideration and allowance of claims 52-66 and 70-76 is respectfully requested. Should any issues arise that will advance this case to allowance, the Examiner is asked to contact the undersigned by telephone.

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Marked Version Of Specification Showing Changes

On page 4, lines 15-22:

Initially, a substrate having a plurality of semiconductor components is provided. For example, the substrate can comprise[s] a semiconductor wafer, or a portion thereof, containing multiple semiconductor dice or semiconductor packages. In addition, the components on the substrate can include component contacts, such as bond pads, in electrical communication with integrated circuits contained on the components.—

Marked Version Of Claims Showing Changes

52. (amended) A semiconductor component comprising:
a substrate comprising a plurality of tested semiconductor components [and] including a plurality of good components and at least one defective component; and
a plurality of conductors on the substrate configured to provide electrical paths to the good components while electrically isolating the at least one defective component.

53. (amended) The component of claim 52 wherein the substrate comprises a semiconductor wafer and the components comprise semiconductor dice or semiconductor packages.

54. (amended) The component of claim 52 wherein the conductors comprise a laser patterned [metal] redistribution layer.

55. (amended) The component of claim 52 wherein the conductors are [-] configured to electrically connect multiple components in a cluster that excludes the at least one defective component.

56. (amended) A semiconductor component comprising:
a substrate comprising a plurality of tested components, each component comprising a plurality of component contacts;
[and a plurality of terminal contacts in electrical communication with the component contacts];
the components including a plurality of good components and a defective component; and
[a metal layer on the components patterned to form]
a plurality of laser patterned conductors on the substrate configured to provide electrical paths between the component [s] contacts on the good components and [the terminal contacts and] to electrically connect the component contacts on [to repair] the defective component.

57. (amended) The component of claim 56 wherein the conductors comprise a metal redistribution layer.
[electrically connect, or electrically isolate, selected component contacts on the defective component.]

58. (amended) The component of claim 56 wherein the conductors are configured to electrically connect a plurality of good components in a cluster.
[terminal contacts comprise balls in a grid array.]

59. (amended) The component of claim 56 wherein the substrate comprises a semiconductor wafer, and the components comprise semiconductor dice or semiconductor packages.



60. (amended) A semiconductor component comprising:
a semiconductor die comprising a plurality of integrated circuits and a plurality of component contacts in electrical communication with the integrated circuits;
a plurality of conductors on the die in electrical communication with the component contacts; and
a plurality of terminal contacts on the die in electrical communication with the conductors;
at least some of the conductors configured to interconnect or electrically isolate selected component contacts or selected terminal contacts to repair [electrical] defects on the die.

61. (amended) The component of claim 60 wherein the terminal contacts comprise [balls in] a ball grid array.

62. (amended) The component of claim 60 wherein the conductors comprise a laser patterned redistribution layer.

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8

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October 2, 2002
Date of Signature


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